

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In the **PATENT APPLICATION** of:

Tino Hänsel

Application No.: 10/565,088

Confirmation No.: 5596

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For: POWER TRANSMISSION DRIVE

Group: 3657

Examiner: Mahbubur Rashid

Our File: INA-PT169

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REASONS FOR PRE-APPEAL BRIEF REQUEST FOR REVIEW

Mail Stop AMENDMENT
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

CASE STATUS

Applicant submitted a Reply after final on October 30, 2009 and has received no response. This Pre-Appeal Brief Review Request is submitted on the last day of the 6 month statutory deadline with the appropriate extensions and Notice of Appeal. As the prior October 30, 2009 Reply only made amendments to claims 2 and 4 to address formalities, which should not affect the substantive argument presented here, it is believed that the section 112 issues in the August 3, 2009 Office Action have been addressed, so only the substantive prior art questions are addressed here.

ARGUMENT

Claims 1, 3, 8, 10 - 14 and 17 stand rejected under 35 U.S.C. §102 as anticipated by JP 62-035154 to Kadota et al.

Claim 1 is directed to a power transmission drive including a synchronous drive for an internal combustion engine with which a rotating angle between a driven member and a drive member can be detected. A member of the power

transmission drive includes an electronic controller which interacts with a control system of the internal combustion engine. A sensor, comprising a transducer, detects an oscillating angle deviation, a rotating angle deviation, an irregularity in RPM, or a correcting movement between the driven member and the drive member and sends a signal to the controller which calculates a control parameter. After a defined limit value is exceeded, the controller initiates an emergency program of the internal combustion engine to operate the internal combustion engine at a lower power level.

Kadota et al. specifically teach that, upon receiving the high level signal S "the engine output limiting portion 51b limits an increase in output of an engine to prevent the occurrence of the gear skip in the timing belt 41." To the extent that the limiting of the increase in output of an engine based on the high level signal being exceeded is considered to be an emergency program, this does not meet the present claim requirement that once a defined limit value is exceeded for a control parameter that an emergency program of the internal combustion engine operates the internal combustion engine at a lower power level. Kadota et al. teach that the output of the engine can be maintained at its same level. There is no suggestion or disclosure to decrease the power level in order to extend the operating time of the internal combustion engine at a lower power state so that the operator can reach a service station or otherwise continue operating the vehicle at the lower powered state in order to come to a safe area.

As Kadota et al. teach limiting and an increase in power output of the engine instead of decreasing the output of the engine and running in an emergency operating state at lower power, the Section 102 rejection of claim 1 should be withdrawn.

Claims 3, 8, 10-14 and 17 depend directly or indirectly from claim 1 and should be similarly patentable for the reasons noted above in connection with claim 1.

Claims 2 and 7 stand rejected under 37 U.S.C. §103 as unpatentable over the combination of Kodota et al. and JP 2003/184682 to Inada.

Claim 2 depends from claim 1 and further recites that the free engine clutch is allocated to the driven member or the drive member to prevent an accelerated angular velocity of the power transmission drive.

Inada is cited as teaching a fuel injection pump with a free engine clutch to prevent reverse rotation. However, Inada does not address the deficiencies noted above with respect to Kadota et al. with respect to claim 1. Accordingly, claim 2 should be patentable over this combination.

Claim 7 also depends from claim 1 and would be patentable over this combination for the same reasons as noted above in connection with claim 1.

Claims 4-6 and 15 stand rejected under 35 U.S.C. §103 as unpatentable over the combination of Kadota et al. and Inada. Claim 4 depends from claim 3 and recites that the power transmission drive includes as a drive member, a fuel pump which is in connection with an associated sensor, the controller and the free engine clutch. The device prevents operation of the internal combustion engine above the lower power level for a disruption in a function of the fuel pump.

As noted above, Kadota et al. fail to teach a controller that initiates an emergency program of the internal combustion engine to operate the internal combustion engine at a lower power level. To the extent that Inada is cited as teaching a free engine clutch (50) used in connection with a fuel pump (40), the claim limitations are still not met by the combination. In addition to the deficiency of Kadota et al., Inada merely provides a one-way clutch to prevent a reverse rotation of a fuel pump. In the present invention, if the free engine clutch or fuel pump fail during operation, the engine power is lowered so that it can continue to operate to provide fuel necessary for the engine to operate at a lower power level while at the same time not causing an overall failure of the power transmission drive due to the timing belt stretching or failing based on the increased load caused by the defective fuel pump or failed free engine clutch. Thus, rather than merely

preventing a reverse rotation as provided by Inada or preventing an increase in the output of the engine as taught by Kadota et al., the present invention provides for a continuing function at a lower power level of the internal combustion engine as the fuel pump is failing so that a service station can be reached. In view of these differences, claim 4 should be patentable over this combination.

With respect to claims 5, 6 and 15, these claims depend directly or indirectly from claim 1 and should be patentable for the reasons noted above in connection with claim 1.

Claim 9 was rejected under 35 U.S.C. §103 as unpatentable over the combination of Kadota et al. and JP 62-180157 to Inagaki et al. Applicant respectfully traverses this rejection.

Claim 9 depends from claim 1 and should be similarly patentable for the reasons noted above in connection with claim 1. Inagaki et al. is cited as teaching a controller that sends an optical signal if an optical angle deviation or rotation angle deviation exceeds a limit value, but does not address the deficiencies noted above with respect to Kadota et al. Accordingly, withdrawal of the Section 103 rejection of claim 9 is respectfully requested.

Claim 16 was rejected under 35 U.S.C. §103 as unpatentable over the combination of Kadota et al. and U.S. 2004/0251758 to Wilmore. Applicant respectfully traverses this rejection.

Claim 16 depends from claim 1 and should be patentable for the reasons noted above in connection with claim 1. Wilmore teaches a starter generator which can be run in both the starting mode and the generator mode. However, Wilmore is silent with respect to the deficiencies of Kadota et al. Accordingly, withdrawal of the Section 103 rejection of claim 16 is respectfully requested.

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CONCLUSION

Applicant respectfully submits that the rejections of claims 1 - 17 in the August 3, 2009 Office Action are not supportable and should be withdrawn.

Respectfully submitted,

Tino Hänsel

By____/Randolph J. Huis/____
Randolph J. Huis
Registration No. 34,626
(215) 568-6400

Volpe and Koenig, P.C.
United Plaza, Suite 1600
30 South 17th Street
Philadelphia, PA 19103
RJH/dmm